

Amendments to the Specification

Please replace lines 25-30 of page 10 through lines 1-30 of page 11 through lines 1-2 of page 12 of the specification with the following paragraph:

In general, insecticidal effectiveness, insecticidal activity, insecticidal efficacy, or like terms, can be characterized as the concentration of active insecticide which kills about 50% of a representative sample of insects within about 24 hours of exposure, for example, by contact or ingestion. The bait composition preferably includes a sufficient amount, such as of at least 0.05 wt-% and preferably at least 0.1 wt-%, of the insecticide-stabilizer, to provide the bait composition with ~~stabilize~~ stable insecticidal activity. In embodiments, an effective amount of an insecticide stabilizer can be from about 5 to about 60 wt-% of the total weight of the insecticidal bait composition. The palatability of the food matrix must also be maintained so that the bait composition is ingested by the insects in adequate quantities to reach a lethal concentration. It is generally desirable to provide a sufficient amount of the insecticide stabilizer in the bait composition to provide a desired lengthening of the insecticidal activity of the bait composition compared with a bait composition not containing the insecticide stabilizer. It is additionally desirable to minimize the amount of the insecticide stabilizer in order to provide room in the bait composition for the insecticide and the bait base. In embodiments the bait composition can include from about 5 wt-% to about 60 wt-% of the insecticide stabilizer. In embodiments of the present invention, the bait base includes as part of the solid mixture from about 5 to about 60 wt-% of boric acid as the insecticide-stabilizer based on the total weight of the insecticidal bait composition. In embodiments of the present invention, the ratio of water-sensitive insecticide to insecticide-stabilizer, for example, acephate:boric acid or acephate:nanoparticle component, can be for example, from about 1:5 to about 1:50. The relative weight percentage of insecticide to insecticide-stabilizer in embodiments can be, for example, from about 1 to about 2 wt-% acephate to from about 5 to about 50 wt-% boric acid, more preferably from about 1 to about 2 wt-% acephate to from about 10 to about 30 wt-% boric acid, still more preferably from

about 1 to about 2 wt-% acephate to from about 15 to about 20 wt-% boric acid, and most preferably from about 1 wt-% acephate to about 15-20 wt-% boric acid insecticide-stabilizer based, for example, on the total weight of the bait composition. Although not desired to be limited by theory, the most preferable boric acid ratio and range with respect to acephate appeared to be the result of an optimal balance between high stability of the water-sensitive acephate insecticide in the formulation and a high acceptance or attractancy levels for cockroaches. Thus, for example, when boric acid was at about 5 to about 10 wt-% the bait was more readily accepted by cockroaches but the acephate was less stable, that is shorter lived and less potent with time. Conversely, when boric acid was at 30-50 wt-% boric acid, the bait is less readily accepted by cockroaches, that is less attractive and less likely to be consumed, but the acephate is more stable, that is longer-lived and more likely to be lethal with time.

Please replace lines 13-17 of page 18 of the specification with the following paragraph:

3. The combined mixture of 2 above is then further combined, as soon as practicable, with a previously ~~prepare~~ prepared bait base which is a mixture of feeding stimulants, insecticidal stabilizer such as boric acid or a nanoparticle component, optional gelling agent and, if desired, other attractants. This combined bait base and active mixtures are thoroughly agitated and optionally allowed to gel.

Please replace lines 13-17 of page 18 of the specification with the following paragraph:

Illustrative materials suitable for sorbing onto or into the nanoparticles, as an active ingredient or as an optional additive can include the following: pesticides, including but not limited to pyretheroids, fipronil, hydramethylnon, abamectin, or imadcloprid;

organophosphates such as acephate, dichlorvos, diazinon, or chlopyrifos; insect growth regulators such as hexaflumuron, hydroprene, methylprene, or pyriproxyfen; insect repellants, including but not limited to DEET, R-874, MOK 326, and like synthetic repellants, and naturally occurring repellants, such as pyretherins, d-limonene, bifenthrin, ginger compounds, pepper compounds, garlic compounds, and like natural repellent compounds; insect pheromones, pest pheromones, and combinations thereof, including but not limited to heptyl butyrate, muscalure, and like compounds; insecticide synergists, including but not limited to piperonyl butoxide, MGK 264, and like compounds; carboxylic acids, such as benzoic acid, acetic acid, octanoic acid, and like organic acid compounds; quaternary ammonium compounds, for example, dimethyl dialkyl ammonium compounds, such as dimethyl ditallow ammonium compounds, and lower molecular weight tetraalkyl ammonium salt, such as tetra-butyl ammonium chloride; fragrances; dyes; pigments; or mixtures thereof.

Please replace lines 21-30 of page 20 through lines 1-2 of page 21 of the specification with the following paragraph:

The foregoing materials can be combined with the nanoparticle component individually, or in various combinations thereof, for example, as mixtures or solutions. Additionally, other materials or ingredients can be sorbed onto or into the surface of the nanoparticle component, or simply mixed with the nanoparticle component, to provide beneficial compositional, formulational, or performance advantages, such as insect baits, pest baits, foodstuffs, viscosity modifiers, and like additives, including but not limited to: food or food ingredients, such as liquefied or ~~powder~~ powered milk, cheese, sugar, and like products; materials that can enable or enhance the sensing or detection by the insect or pest of the pest bait, for example, pheromones; and binders, polymers, gels, gums, and like additives, which additives can provide or promote, for example, agglomeration, suspension, wetting,

adhesion, and like modifications, of the active material(s), additive(s), and the nanoparticle component.

Please replace lines 8-13 of page 22 of the specification with the following paragraph:

The composition is also useful for spot, crack and crevice treatments in food areas. These include, for example, where food or feed is received, stored, prepared, served, packaged, handled in an enclosed system and where edible waste is stored. The bait composition may be directly applied into cracks and crevices, where equipment meets floors and walls; equipment and counter legs; bases, motors and conduits; holes and openings leading to wall voids where [[may]] insects may hide.

Please replace lines 23-30 of page 23 through lines 1-24 of page 24 of the specification with the following paragraph:

Optionally, a third part of the kit can include a dispensing container which is also closable. The container is preferably a cartridge, syringe or cylinder, which container holds the combination of the aqueous insecticide solution thoroughly mixed with the bait base material. The dispensing container can be used for allowing the mixture to set and form a gel if desired. As an example, the dispensing cartridge is then placed in a bait applicator or connected to a bait applicator for application of the composition to the cracks and crevices. The entire kit can be provided as a unitary system assembled in a packet for use at user selected [[site]] sites. Thus, in embodiments the present invention provides a kit for dispersing an insecticidal bait composition comprising: a) a water-sensitive insecticide in admixture with [[a]] an insecticidal activity stabilizing amount of a borate compound, a nanoparticle component, or mixtures thereof; and a base bait; and b) a disperser for

dispersing the insecticidal bait. The disperser can be, for example, a dispenser, a trap, applicator, or like articles or devices.

Please replace lines 11-27 of page 30 of the specification with the following paragraph:

PREPARATION OF NANOPARTICLE CONTAINING INSECTICIDAL COMPOSITIONS. Insecticidal baits containing, for example, nanoparticle component stabilized acephate-water mixtures, were prepared by first forming a solution of acephate in water; second, mixing the acephate-water solution with the nanoparticle component to form a treated nanoparticle component; optionally drying the resulting treated nanoparticle component to remove excess water, or if desired, to ~~[[from]]~~ form a pourable solid or powder; and finally combining the treated nanoparticle component with the bait base. Representative insecticidal bait formulations and the amount of ingredients used in each are shown in Table 4 below, including a comparative control, Bait 8.6, which was prepared by mixing the listed ingredients without a nanoparticle component present. Baits were formulated to contain about 1,000 acephate molecules per nanoparticle. Bait formulations, totaling 10 grams each, were prepared using the ingredients indicated in the table and a different nanoparticle component was used for each bait as indicated in the table footnotes. The bait base used in each sample was the same as used in Formula 2. City tap water and acephate, technical grade O,S-dimethyl acetylphosphoramidothioate from Valent Corp., were used without purification to prepare the samples.